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STENNIS SPACE CENTER

Small Spacecraft Technology Initiative Education Program Fact Sheet

Personnel from the Commercial Remote Sensing Program (CRSP) office at NASA's John C. Stennis Space Center (SSC) in South Mississippi are working closely with the two teams--TRW Inc. of Redondo Beach, Calif., and CTA of Rockville, Md.--to build, launch and help with the development of two small demonstration satellites for the Small Spacecraft Technology Initiative (SSTI).

Representing a new generation of low-cost spacecraft loaded with state-of-the-art instruments, each satellite will transmit high-quality data to demonstrate next-generation remote sensing technology. These technology spacecraft, named after the explorers Lewis and Clark, will demonstrate how remote sensing devices will provide data more efficiently and effectively. Stennis Space Center personnel are also coordinating education programs through the SSTI for local universities and high schools to spark interest in upcoming engineers and scientists.

The mission of the SSTI education initiative is to prepare students for careers that employ science and advanced technologies using NASA-sponsored tools through community focused application projects. The program introduces students and faculty to the concepts and tools of remote sensing and geographic information systems (GIS). Students use remotely sensed imagery collected over their local community in combination with other data sources to address issues or problems native to their area. For example, one school used remotely sensed imagery along with several other student-collected data types, such as land ownership, road access and environmental issues, to identify the best location for a potential water reservoir in their county.

The schools selected to participate became members of the SSTI TRW and CTA teams. Lockheed Martin of Denver, Colo., a CTA team member, is also sponsoring schools in the Denver area. Because satellites will not be launched until the summer of 1996, prototype data must be collected by aircraft instead. This is done using a Learjet operated by NASA's Commercial Remote Sensing Program at Stennis Space Center. The NASA Learjet will collect data over the study sites of selected schools prior to launch of the satellite so that students can conduct an application project during the 1995-96 school year.

One of the main goals of the SSTI educational effort is to ensure that the students and faculty "own" the project. They must have full participation in selection, design and execution of the project. Choosing an application that is of local interest, whose results will benefit the community or city, is both exciting and motivating. A project such as this teaches students real-world applications and produces results that they can experience first-hand. CRSP personnel at Stennis use their experience in the development of remote sensing applications to guide students and teachers in project design and train them in the use of remote sensing and GIS technologies.

"Lewis" schools
sponsored by TRW, Inc. of Redondo Beach, Calif.:

- W.P. Daniel High School, New Albany, Miss,
- Inglewood High School, Inglewood (Los Angeles), Calif, .
- Glenbrook Middle School, Concord, Calif.

"Clark" schools
sponsored by CTA of Rockville, Md.:

- Montgomery Blair High School, Silver Spring, Md.
- Thomas Jefferson High School of Science & Technology, Alexandria, Va.

sponsored by Lockheed Martin of Denver, Colo.:

- Wheat Ridge High School, Wheat Ridge, Colo.
- John F. Kennedy High School, Denver, Colo.

For more information about NASA's Small Spacecraft Technology Initiative, contact the Stennis Space Center Commercial Remote Sensing Program Office at (601) 688-2305.

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